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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,983	09/15/2003	Yann Guezennec	OSU1159-194B	2255
8698	7590	07/28/2005	EXAMINER	
STANDLEY LAW GROUP LLP 495 METRO PLACE SOUTH SUITE 210 DUBLIN, OH 43017			HOGAN, JAMES SEAN	
			ART UNIT	PAPER NUMBER
			3752	

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/662,983	Applicant(s) GUEZENNEC ET AL.	
	Examiner James S. Hogan	Art Unit 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 28-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-27 and 36 is/are rejected.
- 7) ☒ Claim(s) 11-14, 16 and 25-27 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11/24/2003</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-27, and 36, drawn to atomization system, classified in class 239, subclass 135.
- II. Claims 28-32, drawn to catalytic exhaust treatment system, classified in class 123, subclass 60
- III. Claims 33-35, drawn to humidification system classified in class 429, subclass 13

The inventions are distinct, each from the other because of the following reasons:

Inventions I, II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions the applicant is using claimed components in a system for different uses.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Claims 28-35 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or

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linking claim. Election was made **without** traverse for Group I, claims 1-27 and 36 in a phone conversation with Attorney Michael Stonebrook (Reg. No. 55,851) on July 18, 2005.

Drawings

The drawings are objected to under 37 CFR 1.83(a) because they fail to show details of all components as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d), are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 11-14 and 25-27 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The meets and bounds of the claims cannot be determined with no further limiting claimed features, not can the mere interchangeability of the preamble of the claim make a claim patentably distinct from another. Hence the claims will be considered rejected along with claims 1 and 15 in later paragraphs.

Claim 16 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 16 appears to repeat the preamble of claim 15 referring to the inlet pressure of a pressurized fluid source having a pressure higher than the discharge pressure of a fluid, which is inherent.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 11-14 and 25-27 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The meets and bounds and the claims cannot be determined with no further limiting claimed features. Hence the claims will be rejected with claims 1 and 15 in later paragraphs.

Claim 10 recites the limitation "the electrical resistance of said fluid conduit" in lines 1 and 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-5, 8, 9-16, 19, 21-22, 25-28 and 36 rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,871,792 to Pellizzari.

Regarding claims 1, 15, 16, and 36 Pellizzari discloses an atomization system that has a fluid conduit (12) for transporting a pressurized supply of a fluid discharging into a discharge zone (near 18); and a heating element (20) that delivers sufficient

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thermal energy to the fluid traversing the fluid conduit such that the vapor pressure of the fluid is greater than the pressure in the discharge zone so as to cause the fluid to atomize in the discharge zone thereby producing a mist of sub- micron sized fluid droplets, the result of which is the inlet pressure of a fluid being higher than the discharge pressure of a fluid. Further taught, and embodied within figure No 5, a temperature sensor (106) can be employed to control the controller (Col. 11, line 55). Additionally, a flow control element, (valve 18), controls the volumetric flow of fluid. Claim 21-23 of ('792) teaches the controller activating and deactivating the heating element in response to a temperature sensed by a temperature sensor, and also the flow of fluid through a valve in response to a measured pressure. As per claim 2 and 3, a resistive type heater commonly known as a glow plug, is taught to be a usable source of heat for the heating element (see Abstract). As per claims 4, and 5, the conduit is capillary tubing, and is used as a resistive heater by applying electrical current between two points (22 and 24) on the conduit (see claims 15-17 of ('792)). As per claim 9, figure 4 shows the temperature sensor (106) sensing the temperature of the capillary tube. Regarding claims 19 and 21, Pellizzari ('792) teaches a solenoid valve (28) as operating a flow control valve (Col. 9, line 40), and therefore an electrically controllable flow restriction. As per claim 22, the flow control device is placed upstream of the fluid conduit (see claim 1 of ('792), item (b) recites the fluid control valve being placed at the inlet end of the conduit)

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-8, 20, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,871,792 to Pellizzari.

Regarding claims 6-7, does not teach a conduit that is a coiled tube, however it teaches that the conduit can be "any shape" (col. 6, line 60), which would include a coiled arrangement. As per claim 7 and 10, the fluid conduit is used as a resistive heater by applying electrical current between two points (22 and 24) on the conduit. It would have been obvious to one skilled in the art at the time the invention was made to have used the capillary tube as taught by Pellizzari in order to provide the most compact version of a resistive heated conduit.

Regarding claim 8 the sensor depicted in figure 4 is shown to be at a random point on the capillary tubing and no mention is given to a distinct favorable location, however it would have been obvious to one skilled in the art at the time the invention was made to have located a temperature sensor in any desired location since it is held that the rearranging of parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

Regarding claim 20, Pellizzari ('792) teaches a solenoid valve (28) as operating a flow control valve, but not servo-valve. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have substituted a servo-

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valve for a solenoid valve since the examiner takes Official Notice of the equivalence of a servo-valve and a solenoid valve for their use in the fluid handling art and the selection of any of these known equivalents to use as a flow control valve could be within the level of ordinary skill in the art skilled in the art.

Regarding claims 23 and 24, the placement of the flow control valve it would have been obvious to one skilled in the art at the time the invention was made to have located a temperature sensor in any desired location since it is held that the rearranging of parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

Claims 17-18 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,871,792 to Pellizzari, in view of U.S. Patent 6,913,004 to Pellizzari et al.

The rejection of claim 15 above serves as the basis for the following. Regarding claims 17-18, Pellizzari ('792) does not teach any specifics of any signals being sent to a flow control valve. Pellizzari et al. ('004) teaches a controller (450) executing a control algorithm based on one or more input signals (Col. 13, lines 48-50), but does not specify their type. It is regarded that Pellizzari et al. ('004) and Pellizzari ('792) disclose the claimed invention, so the choice of platform for the type of signal involves only engineering expedience, therefore it would have been obvious to one skilled in the art at the time the invention was made to have employed the controlling algorithm of Pellizzari et al. ('004) into the device of Pellizzari ('792), and to have used either an analog signal or a pulse width modulated signal in order to have a controller that can actuate a flow control valve.

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Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is as follows:

U.S. Patent No. 6,290,024 to Ehlert, disclosing an oil mist generation system


U.S. Patent No. 6,601,776 to Oljaca et al., disclosing atomization methods

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Hogan whose telephone number is (571) 272-4902. The examiner can normally be reached on Mon-Fri, 7:00a-4:00p EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Scherbel can be reached on (571) 272-4919. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JSH
07/19/2005


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